LA-UR-04-7998

Approved for public release;
distribution is unlimited.

Title:	Escaping the Compliance Trap
Author(s):	J. P. Kindinger Los Alamos National Laboratory
Submitted to:	Internal report

Form 836 (8/00)

LA-UR-04-7998

Escaping the Compliance Trap

J. P. Kindinger
Decision Applications Division
Los Alamos National Laboratory
November 2004

ABSTRACT

As the operations resumption process (now in its fourth month) continues at Los Alamos National Laboratory (LANL or the Laboratory), many of the employees, customers, and other stakeholders in the work done by the Laboratory share concerns about how to conclude this effort successfully and in time to prevent the loss of critical lab missions. Additionally, the growing backlog of anticipated corrective actions resulting from operations assessments raises further concerns about the long-term impact of the suspension on Laboratory capabilities and efficiency/productivity. Colleagues have noted that several significant weapons complex facilities did not survive their work suspensions.

This paper presents the thesis that retaining key missions and achieving high efficiency in future operations at LANL requires a fundamental shift in the paradigm used to manage the institution from one focused on compliance with requirements to one that uses a focus of managing to achieve performance on a balanced set of metrics.

Defining the Compliance Trap

Figure 1 presents a simplified diagram of the key elements involved in managing a major institution such as Los Alamos National Laboratory (LANL, or the Laboratory). In this diagram, the traditional downward command flow from strategic plan down to process execution performance is countered by the upward flow of process compliance requirements. This process compliance includes requirements for safety, security, environmental issues, and quality assurance. These conflicting requirements from above for "product" and from below for "process" create a natural tension within the process execution performance function. Without an appropriate balance between these two forces, an overemphasis on one or the other will occur in the organization that can lead to poor overall performance and even total failure.

If product priorities are allowed to dominate, then the organization will enter a *product trap*, and performance in worker safety, public health, and environmental impacts will suffer. It could be argued that this product trap was the dominant management paradigm of the nineteenth century. Since the advent of extensive government regulation and product liability lawsuits, however, sensitivity to compliance requirements continues to be heightened, and the more likely imbalance today is the *compliance trap*, where concerns for regulatory violations and legal vulnerabilities would be given more weight than goals for the production of goods and services.

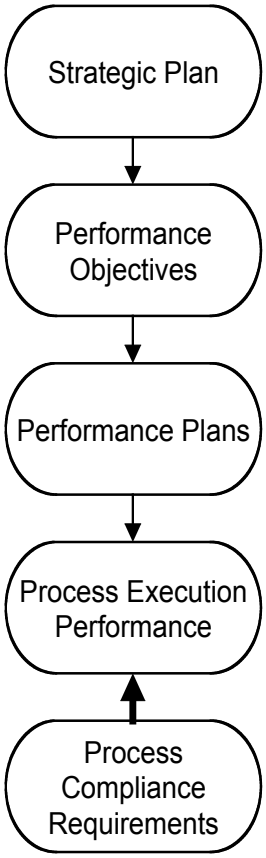

Fig. 1. A typical command-type management structure.

Beyond the cessation of production work such as LANL is experiencing, symptoms of an organization caught in a compliance trap could include

- inability to report actual performance with confidence and multiple interpretations of performance data;
- no consensus on how good is good enough for process compliance performance;
- inability to demonstrate accountability and stand scrutiny;
- inability to plan future work with confidence;

- no consensus on priorities for making investments; and
- management and decision making focused on noncompliance issues.

In addition, if the product/process imbalance is severe enough, the organization can enter a death spiral scenario, where compliance requirements begin to escalate faster than the organization's ability to address them. Then even with a total devotion to process improvement, the task becomes larger with time, and the compliance performance variance grows until the organization succumbs altogether. This is a scenario I personally experienced as a member of the Consumer's Power Company's Midland Nuclear Project ($4.5 billion failure) and one that I believe accurately describes the failures of other nuclear power projects and the closure of US Department of Energy (DOE) facilities such as Rocky Flats, K-Reactor, and N-Reactor.

Seeds of the Trap

In addition to recognizing symptoms, the question of how an organization initially falls into the compliance trap is important to address. First, I believe an important principle of human behavior is at work here that deserves discussion. Simply stated, people acting either individually or in groups naturally will strive to achieve organizational goals at the highest level of achievement that they are able to understand clearly. Without coordination and discipline, these efforts, although well intended, will be chaotic and may even produce perverse results. However, when properly focused, this natural desire to achieve can produce an organization that is dynamic, innovative, and productive far beyond the capabilities of the individuals that make it up. The role of this principle in causing organizations to fall into the compliance trap then follows a pattern something like this:

1. For some reason that is generated either internally or externally, an organization loses strategic focus. This uncertainty then flows down to performance objectives and plans (see Fig. 1), and they in turn become unclear to people within the organization. This lack of clarity also extends to the desired balance between "product" and "process" performance.
2. Without a clear understanding of higher-level goals and priorities, people fall back to lower-level goals and priorities that they clearly can understand. At the lowest level, externally generated process compliance requirements for safety, security, environmental releases, and other issues are always available. These issues then become the default strategic goals for the organization.
3. As the focus on process compliance increases, people increasingly come to believe that poor overall performance is the result of inadequate process execution that can be remedied only by increased specificity in process compliance requirements and increased oversight of process execution. Process compliance departments and people become prominent in the organization.

Thus the trap is sprung. I believe that LANL has fallen into the compliance trap, taking a path that falls within the one described above and that evolved over a period of years following the end of the cold war. From its beginning throughout

the cold war era, LANL had the generally recognized goal of building bigger and better weapons that could be used to deter and, if necessary, defeat our adversaries. Thus, for more than 40 years the fundamental cycle of new weapons design, manufacture, and testing endured. This cycle was interrupted with the end of the cold war, and LANL, along with the nuclear weapons complex of which it is a part, has never adjusted fully to this reality. Thus, the initiator of step one described previously was externally generated. LANL's fall into the compliance trap also was exacerbated by the shroud of secrecy that covers much of the work done here. This shroud served to isolate many internal Laboratory processes from the increasing government regulation that most other industries felt very keenly beginning in the 1970s. Once this shroud was lifted, the adjustment required by the Laboratory was made that much more severe.

Escaping the Trap

So what can LANL or any organization that finds itself caught in the compliance trap do to restore the balance between "product" and "process" and escape the trap? I believe the answer lies in the effective use of performance metrics and institutional values.

Performance metrics always have been an essential management tool, but as the performance requirements placed on institutions have grown and become more complex, performance metrics management techniques also have grown to where the practice has become a specialized management discipline in its own right. A significant milestone in the development of performance metrics management came in 1992 with the publication of the paper "The Balanced Scorecard—Measures That Drive Performance" by Robert S. Kaplan and David P. Norton.[1] In this ground-breaking paper, Kaplan and Norton reported on the results of a research project they conducted with 12 companies testing the use of a new approach to performance measurement that would give managers a fast but comprehensive view of the business. The resulting "balanced scorecard" includes metrics covering four performance perspectives: financial, customer, internal operations, and innovation and learning.

This paper was followed by several more papers and books from Kaplan and Norton, as well as scores of publications from others expanding and adapting the balanced scorecard concept to all types of organizations. A selection of these publications on performance metrics management is listed in Refs. 2 through 10.

A key feature of the balanced scorecard concept is that its effective use involves not only the identification, tracking, and trending of appropriate metrics, but also the application of institutional values to the weighting of metrics to achieve a desired balance in performance. This concept is absolutely critical because it is through the exercise of its values that an organization truly communicates the behaviors it is willing to reward (or punish). This principle often is stated in more colorful ways, such as "follow the money" or "don't just talk the talk but walk the walk." However, employees are very astute at interpreting corporate values from actual behavior.

In Fig. 2, I have added performance metrics and institutional values to the simplified management structure from Fig. 1. Organizational values now can operate through performance metrics to exert control over the balance between "product" and "process." In addition, the natural desire for achievement described earlier now can act in a positive manner to improve overall performance. With performance metrics well defined and clearly understood, people will act on their own initiative to improve performance and achieve new goals. More specifically, the positive reinforcement of measured performance will cause people to seek out best practices that will improve performance without being directed to do so by external forces. I believe that self-initiated improvement initiatives are more quickly adopted and more effective than are command-generated initiatives.

In summary, my thesis is that better performance can be achieved with the improved communication and management of desired performance while reducing the need for orders, directives, regulations, and audits.

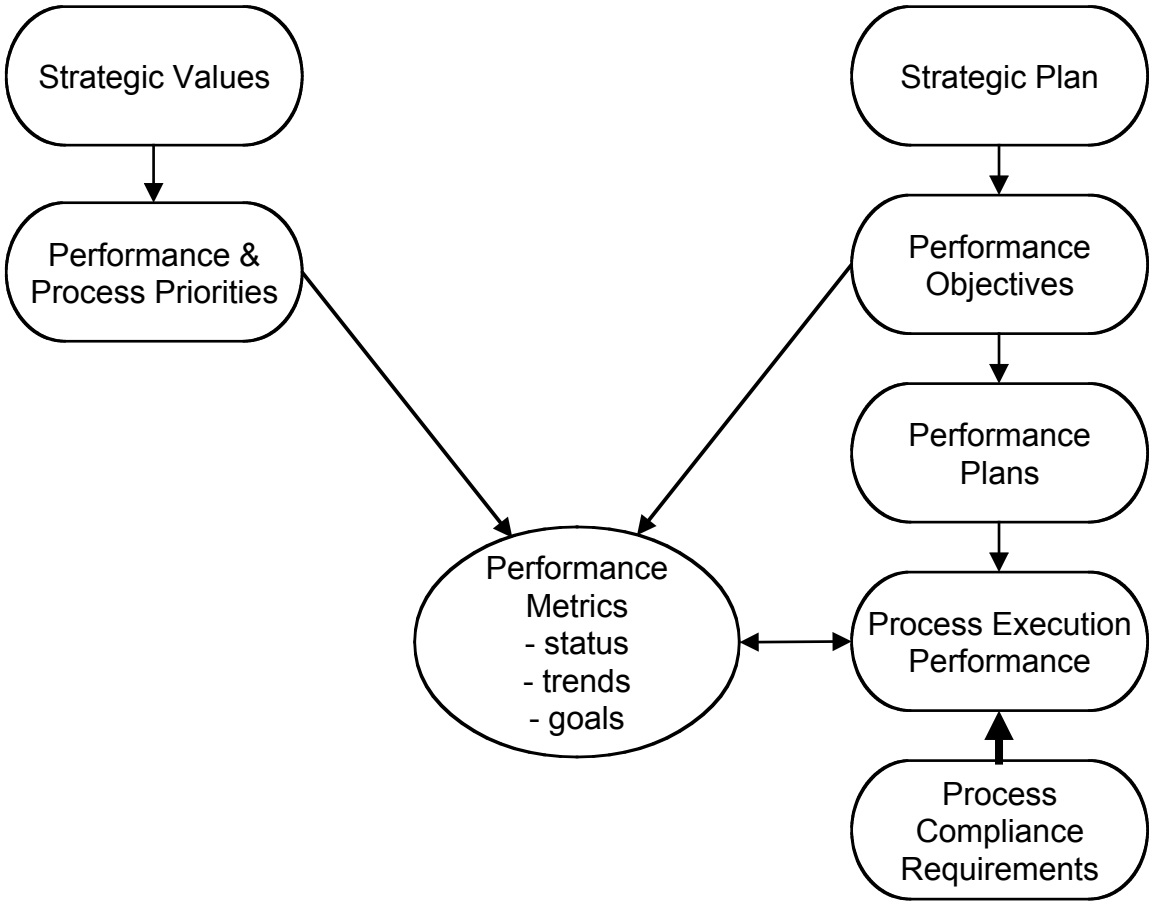

Fig. 2. A management structure with performance metrics and organizational values.

Directions for Los Alamos

I believe that the following commitments/actions are necessary to help LANL escape the compliance trap.

1. Commit to the use of a performance metrics management system for the Laboratory.

2. Identify a balanced set of performance metrics and indices that
   - measures what matters and what are directly linked to strategic goals,
   - addresses mission performance,
   - addresses internal operations, and
   - addresses employee satisfaction.

3. Apply organizational values to the use of the metrics:
   - Use values to weight specific measurable metrics when aggregating into performance indices.
   - Recognize that compliance with directives through an appropriate graded approach is acceptable.

4. Link the performance metrics with Enterprise.
   - Enterprise business systems provide the foundation of prompt and reliable data on which a performance metrics management system must be built. Thus, the real business case for the Enterprise project is the enabling of performance metrics management.

5. Use the metrics in everyday management and decision making.
   - Use performance to guide the rigor appropriate for meeting requirements where a graded approach to compliance is allowed.
   - Do not allow exceptions to the performance metrics management system. LANL culture traditionally rewards those who end-run established systems.
   - Require that recognized performance improvement needs drive the search for new ideas rather than the ideas coming first and then searching for institutional endorsement.
   - Base investment decisions on their projected benefits in metrics performance (no hip shooting).
   - Use performance metrics as a component of performance appraisals.

These commitments and actions are not easy to accomplish, and, to be successful, they will need to be done in partnership with the National Nuclear Security Administration.

This paper at best can serve only as an introduction to this subject. I encourage readers to examine any of the expanded references I have included to further their own knowledge in this area.

References

1. Robert S. Kaplan and David P. Norton, “The Balanced Scorecard—Measures That Drive Performance,” *Harvard Business Review* (January–February 1992).

2. Robert S. Kaplan and David P. Norton, “Putting the Balanced Scorecard to Work,” *Harvard Business Review* (September–October 1993).

3. Robert S. Kaplan and David P. Norton, “Using the Balanced Scorecard as a

Strategic Management System," *Harvard Business Review* (January–February 1996).

4. Robert S. Kaplan and David P. Norton, *The Balanced Scorecard: Translating Strategy into Action* (Harvard Business School Press, Boston, Massachusetts, September 1996).
5. Robert S. Kaplan and David P. Norton, *The Strategy Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment* (Harvard Business School Press, October 2000).
6. Robert S. Kaplan, *Balanced Scorecard Step-by-Step: Maximizing Performance and Maintaining Results* (John Wiley & Sons, Inc., New York, NY, October 2002).
7. Paul R. Niven, *Balanced Scorecard Step-by-Step for Government and Nonprofit Agencies* (John Wiley & Sons, Inc., New York, NY, June 2003).
8. Paul R. Niven, *Balanced Scorecard Step-by-Step: Maximizing Performance and Maintaining Results* (John Wiley & Sons, Inc., New York, NY, October 2002).
9. Mark Graham Brown, *Keeping Score: Using the Right Metrics to Drive World-Class Performance* (American Management Association, New York, NY, May 1996).
10. Mark Graham Brown, *Winning Score: How to Design and Implement Organizational Scorecards* (Productivity Press Inc., New York, NY, September 2000).